gone unresponded to. Although farm hotlines, extension services, and financial and legal assistance has been given to the farmer, little attention has been paid to the youth who have experienced the same crisis, leaving them confused and scared about their future.

When the future of rural youth is shattered, so too is the future of the community. Rural youth need to believe in themselves again. But we must beware of inappropriate counseling methods. Although we must deal with their emotional side, we also need to take some form of action that will empower them to change their situation, so they don't slump down into the same rut of depression.

One thing they really do need, is to be treated like the vital part of the community that they can be. Too many times, community projects fail to include youth in the planning and organizing process, and then wonder why the youth aren't excited about the activity.

As rural educators, we can no longer bury our heads in the sand, and continue to teach as if there was no tomorrow. We must rebuild our communities, to provide a place where youth will be proud to return to. And we must empower youth to pursue their visions, and dispell the myths that are having a death-blow on their future in rural communities.

Section VI
Redesigning Iowa Rural Schools: Sharing, Restructuring or Consolidating

Introduction

As a group of public school educators, university professors, parents and interested citizens sat together for three days to discuss redesigning of Iowa rural schools, it was evident that this was not going to be an easy task. Many, many issues were discussed and how they impacted the recent (renewed) interest in redesigning Iowa rural schools. As one participant indicated, "School restructuring is much more than an educational issue. It addresses the very social fabric of rural Iowa or possibly the entire state. . . ." Conference participants who had an interest in the restructuring segment of the conference held strong beliefs about rural education and what the history of the educational process has achieved over the past century. No one was willing to eliminate rural schools but more of a realistic attitude that some restructuring needs to take place and it should be done in an orderly, systematic process based on researchable and factual information, not on the perceived will or whim of the state legislature.

If restructuring Iowa rural schools is to become a reality and accepted by the majority of rural Iowans, two issues will need to be addressed. First, educational equality and just what does that mean for rural education. Second, financial efficiency and impact of this issue on programs, personnel, and academic accountability. As a participant stated, "The combination of these two basic issues has given rise to the current concern on redesigning Iowa rural schools. The basic questions are: What is the minimum acceptable quality of education available to each student? And, how much will the residents pay for that education?" Given these issues and the financial incentives the state of Iowa is giving school districts who enter into sharing agreements (student, faculty, administrative, and program), has created a tremendous impetus for rural school districts to look

for new ways to "do business." However, as these financial incentives begin to fade and become non-existent, fundamental restructuring will take place. The following position papers are the thoughts of conference participants who had a special interest in the topic, "Redesigning Iowa Rural Schools: Sharing, Restructuring or Consolidating."

Norman Boyles, Professor
Iowa State University

In 1980, I wrote the following as a part of an Area Education Agency's state mandated reorganization plan:

> "The restructuring of school districts in the United States has flourished for the past 50 years. This has been especially true since World War II. These changes have been brought about by a variety of forces.
>
> 'The development of the telephone, radio, and television had an effect on communication. Better roads, automobiles, and trucks, along with airplanes and trains, knit the people of the nation closer together. On the farm the steel plow replaced the wooden one just as the tractor did the horse. Better seed, better fertilizer, and better agricultural techniques resulted in a revolution in the rural areas with fewer but larger farms. All these technological advances affected social institutions. Technological developments have also affected the manner in which people are distributed. The United States is now predominantly an urban rather than a rural nation. Such changes have stimulated reorganization of the structure of public education.'[1]
>
> With the restructuring process still a factor in all of the states, certain states are more attuned to some or all of the problems indicated by Knezevich. Iowa faces the problems of reorganization, restructuring or school district change (whatever one chooses to call it) because of two immediate factors: 1) declining enrollments in almost all areas of the state and 2) the fact that the state funding plan is tied directly to the number of students in each district.
>
> Because of these two factors and the additional element that the state legislature controls the local districts resources for education through the State Foundation Plan, many districts are faced with insurmountable problems. Given the previously stated circumstances some form of change is unavoidable."[2]

Following this introduction a plan to "share, cooperate and confederate" was put forth. The idea was to put into action a plan which would allow districts to move through certain steps to eventual reorganization into county-like units. I take some pride in this plan because I think it was conceptually sound. Conceptually, maybe? But it was not what the people of the AEA wanted. Faced with low enrollments (less than 300 in seventy percent of the districts in that AEA), they resisted the plan to bring about an orderly restructuring of their schools. Who was right? The citizens committee who did most of the ground work and the consultant who put their ideas into writing and a framework, or the general citizenry who rejected the plan with a resounding NO!? I have come to believe that the citizenry may not be right, but they are never wrong. They hold the

ultimate power in these matters . . . the vote. Those who are elected know that the vote will be used to express feelings about reorganization.

If the citizenry is never wrong, in what ways were they right? I assume that they felt that there must be another answer to this problem:

"If they can put a man on the moon, then . . ."
"Why not solve this problem in another way?"

These are common retorts to the asserted need for reorganization.

Recent information does suggest that the smaller school district can do the job of educating their youth. Also, the promulgator of the open enrollment plan for Minnesota indicates that the out-migration of students in that state, thus far, is from the large district to the small district.

How then do we provide for the small school?

My answer is restructuring. We must restructure our schools with two things in mind: (1) Restructure so that districts are economically feasible, and (2) restructured districts must be educationally sound.

Number one is the proposition that what we create as a part of the restructuring process must be defensible in terms of the total state economical picture. In restructuring the school districts, smallness could be the by-word. We might ask, "How small can a district be and yet be economically feasible for this state and its financial base." In other words, we would not start with an attitude of larger is better, but rather an attitude of preserving the smallest possible entity.

Second, what is created must be educationally sound. Educationally sound is like saying the educational system must be "appropriate." "Appropriate" and "sound" by what definition? Our present state standards might well serve to be the measuring stick in this instance. As arbitrary as it might seem to be, the decision of appropriateness and soundness must be made.

Taking these two elements and applying them to a scheme for restructuring the schools of Iowa would be done in one of two ways: (1) let a commission look over the scene, review the data and make the decisions, or (2) let the process that is taking shape run its natural course. With the current state standards and the coming revised state foundation plan, which should abandon the phantom student and other ruses to support the unsupportable, there should be an evolution of district organization into an appropriate and sound state organizational structure.

A note is appropriate here to my call for an attitude of smallest possible units. Iowa has produced students with an uncommonly high educational ethic. Whether by genetic influence or by staying power or superior instructional acumen or small intimate school setting, we must not lose the edge. I think we can best maintain that edge through an evolutionary restructuring rather than a revolutionary restructuring of the schools of Iowa.

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Others in this conference have the task of putting a face on the role of technolgoy for rural education but I must include a word here because of the importance technology should play in the evolutionary development of the school districts of Iowa.

With the use of technology, each school and school district would have choices. Those choices would demand an internal restructuring of the curriculum and instructional programs.

Technology and its accompanying benefits demand new approaches. Shall we set a student down to a computer and tune him/her into a educational data base service and let him/her alone? No, I don't think so, but I do think that a carefully planned use of such a data base for most students would resolve several of the problems of the small district in Iowa. Marry that data base with the several other information sources and the need for students to be knowledgeable about the use of information sources and a district may have available an answer to many of the problems inherent in the small districts of Iowa.

We must face the economic inefficiency of the smallest districts in Iowa. We must bring about an orderly restructuring of those districts and give the support they need to progress and provide the traditionally outstanding educational experience provided to young Iowans for more than a century. So, establish standards and set the financial parameters and let the process evolve.

References

1. Knezevich, Stephen J., *Administration of Public Education*, 3rd Edition, Harper & Row, Publishers, New York 1975, p. 218.
2. Boyles, Norman L., Lakeland Area Education Agency 3 Developmental Plan. Unpublished report to the Board of Directors, November 1980.

Robert Decker, Assistant Professor and
Adrian Talbot, Adjunct Instructor
University of Northern Iowa

Sharing a Superintendent: Placebo or Panacea?

Faced with unfavorable demographic and economic trends, many Iowa school districts have been seeking innovative ways of re-shaping themselves in order to continue providing high quality educational programs. Many districts, encouraged by legislative incentives are currently sharing grades, teaching staff, and administrators. During the 1988 fall semester, the authors solicited the opinions of superintendents who have been employed simultaneously in two or more neighboring districts. Based upon their responses during a semi-structured interview, we take the following position:

> In the absence of sincere school board intentions to pursue grade sharing and possible reorganization with a partner district within three to five years, we strongly discourage administrators from entering a shared superintendency.

To justify our position, we will outline briefly some of the difficulties and challenges which face the shared superintendent.

The first challenge focuses on the need for communities and administrators to redefine the superintendent's role. A large number of participants recounted the difficulties communities had encountered adjusting to a superintendent who was far less visible and accessible than had been the case prior to sharing. In many small systems, patrons are used to raising questions informally with the superintendent during his/her attendance at civic functions. Indeed, participation in community events and maintaining a home in the school district are often high priorities among community members, and have a direct bearing on their perceptions of the superintendent's effectiveness. To employ a superintendent who lives in a neighboring community and is rarely seen talking with residents, is a difficult concept for some patrons to accept. Communities must be prepared to redefine their expectations, if they decide to hire a superintendent who is only employed by them half-time.

Superintendents must also analyze their manner of operating. This may well necessitate a re-ordering of priorities and delegation of authority. Due to the requirement that separate meetings be held with the board in each district, superintendents frequently find themselves "besieged by paperwork." The consequence of the increased bureaucratic demands is a diminution, and frequent cessation, of instructional and curricula leadership. In spite of working weeks which often exceed 70 hours, time spent traveling between districts and meeting board members leaves little opportunity to become directly involved in the educational program. As a consequence, superintendents frequently experience a sense of isolation, a

remoteness from the actual practice of education. This separation is compounded by the stress created by long periods away from home and family.

A second challenge presents itself in the need to constantly "change gears." Physically moving from one district to another can have a disorienting affect, forcing superintendents to take "reference checks" to ensure that the appropriate policy is being enforced in the correct district. When administering a single district, a lot of details are absorbed subconsciously and are referred to frequently without the superintendent really being aware of it. When sharing two districts, however, superintendents find it necessary to ask themselves "now which district is this," before making specific decisions. The maintenance of two separate offices, in two locations, often 10 or more miles apart, merely adds to the difficulty of living "a double professional life." This need to be almost constantly in transit, generates the sense that little is being accomplished. Few significant tasks can be carried through to completion before it is time to don the hat in the "other" district.

A fourth challenge to be faced by the shared superintendent is to satisfy the expectations of two communities whose aspirations, philosophies, financial status, and enrollment may be dramatically different. The magnitude of this challenge increases dramatically where intense, and sometimes acrimonious rivalries have existed between the districts (often generated by athletic competition). Attempting to be all things to all people under such circumstances can be an exacting undertaking.

Despite the increased work load, stress, role ambiguity, and conflicting community expectations, respondents *did not* condemn the concept of the shared superintendency as being totally unworkable. As we inferred in our position statement, superintendents are willing to face these challenges for a prescribed period of time. Where two districts have a sincere intention of moving toward further joint agreements, within three to five years, the superintendent has a target date when, hopefully, pressures will dissipate. In addition, where districts are motivated to share in order to improve the quality of the educational programs available to students, superintendents are prepared to put their shoulder to the wheel. Under such circumstances the authors endorse the shared superintendency. By contrast, when the primary motive is cost saving and economic efficiency, we, along with superintendents are far less inspired. The sincerity of districts' motives in this regard is soon reflected by their relative openness to expending state incentive monies on hiring specialists in curriculum development, whose services are traditionally far more limited in rural areas.

In closing, we make one further comment. Contrary to our initial expectations, the most satisfied superintendents were individuals who were shared by two districts which had had a number of other sharing agreements already in operation *prior* to the advent of the shared superintendency. In essence, far from being the engineers of some new arrangements between two districts, the most successful shared superintendents

were the capstones on a pre-existing structure. For districts contemplating some form of re-configuration in the future, contrary to what might appear to be intuitive wisdom, sharing a superintendent should be the last as opposed to the first avenue to pursue.

Guy Ghan
Iowa Department of Education

The purpose of this School District Restructuring Report is to summarize the restructuring activities of 1987, chronicle the restructuring events for future reference, and analyze problems that developed during the year. This report, which has been produced annually for many years, is normally a more routine data based summary of events. However, an analysis of the events that took place during 1987 leads to the conclusion that a different style of writing is necessary if future generations are to use the Department's annual report to gain a true understanding of the large-scale changes that are taking place.

It is with this in mind that the author of this report, the Restructuring Consultant in the Bureau of School Administration and Accreditation, frequently uses a more personal manner of writing. One cannot have become aware of threats and vandalism, and even witnessed this on occasion, and still remain totally scholarly in style of reporting.

Part one of the report summarizes a speech that has been given by the Restructuring Consultant over two dozen times during 1987. The remaining parts are similar to portions of reports that have been produced in prior years.

Before launching into the body of the report, the reader needs to be aware of three conditions that entwine all other elements of school restructuring: (1) The term school restructuring came into common use during 1987. It includes three specific types of actions—reorganization, dissolution, and whole-grade sharing. All are very strong measures and actions of strong public policy. (2) The public school districts of Iowa are at the beginning stages of large-scale changes similar to the changes experienced between 1952 and 1966. (3) The changes are being driven by more than education considerations. Political elements seem to play a very important role in the process. Seemingly more pronounced than education issues and well planned political strategy are the emotional directives of individuals, groups, and communities. School restructuring is simply a very personal and raw emotional activity.

THE SPEECH

School restructuring is much more than an educational issue. It addresses the very social fabric of rural Iowa or possibly the entire state, and the current trend of restructuring is the culmination of a series of conditions that have been with us for many decades. First, the population/demographic circumstances within the State started the process. In 1900 Iowa's population was 2,231,853 and in 1980 it was 2,915,197; whereas, the farm population of 964,659 in 1930, shrunk to 391,070 by 1980. The advent of mechanization and chemicals on farms has enabled farmers to work larger and larger amounts of land. This, along with smaller farm families, has greatly reduced the number of people living on farms. That dwindling number, in turn, has led to the reduction of the populations of

many small rural towns. Two other population factors that are causing changes in school enrollments are the aging of Iowa's population and the outmigration from the state.

Following on the population/demographic changes are the strengthening elements of the metropolitan areas and the other more populated municipalities. Employment, mercantile activities, and leisure pursuits have been leaving rural areas for the population centers. The automobile, good highways, shopping malls, large advanced hospitals, and sporting complexes have all brought population to more concentrated locations.

School districts, as they make the moves to become bigger in the late 1980s and beginning 1990s, are merely reflecting government change that is following on the heels of the other changes that have already taken place. We must understand that schools are government entities that are put in place to provide a service to the citizens of Iowa in an economical manner and of an equitable quality across the state. It is difficult for citizens to view their schools from an unemotional, businesslike perspective. Schools tend to be places where many happy years were spent, where basketball games were played, the home of the "Bulldogs, Spartans," or whatever name was given to the school.

Population/Enrollment Information

Iowa tends to think of itself as a state of small school districts. Depending upon a person's definitions of small, this is usually a mistaken notion. Presently there are 87 districts with less than 300 students. The total student headcount of all these districts is approximately 19,000. The single school district of Davenport has almost that many. Over half the schools in Iowa have less than 600 students. The total number of children in all districts of less than 600 is approximately 85,000. That is not very many, considering there are about 480,000 students in the public schools.

Another mistaken notion, relates to the number of very large geographic areas in school districts. A routine county is twenty-four miles by twenty-four miles. That produces 576 square miles. Only eleven districts have territory that is greater than one-half of a routine county (288 square miles).

A recent newspaper survey noted that a majority of Iowans like the small districts. The problem with interpreting that sentiment is the definition of small. Department of Education staff, in talking with people encountered situations such as the person from Ankeny who said, "sure I like small schools like Ankeny." Ankeny has almost 4,000 students. That is small compared to the 30,000 in Des Moines.

Types of Restructuring

There are three types of restructuring. The term restructuring is not used to hide the word "reorganization." It is used as a term to include reorganization, dissolution, and whole-grade sharing. The words, consol-

idation and merger are synonymous to reorganization. All three types of restructuring are major government activities and none should be taken lightly.

Reorganization is a citizens' process that is started with a petition signed by citizens and culminates in an election. If successful, the process produces a new district, with a new board, new boundaries, a new tax base, etc.

Dissolution is a process that is started by the school board and ends in an election. If successful, the dissolving district is divided into two or more neighboring districts. New entities are not formed as in reorganization.

Whole-grade sharing is a relatively new legal option. This restructuring process is started and completed by the boards of directors of two or more districts. In "one-way whole-grade sharing," the board sends its students (usually junior and senior high) to a neighboring district. In "two-way whole-grade sharing," two districts enter into a contract whereby one provides the education for some grades, and the other district provides the programs for other grades. For example one district might have the junior high and the other the senior high. Whole-grade sharing is more temporary in that a board may terminate the contract at the end of the contract period. Most contracts are initially established for multiple years. Department staff note that a district is not very likely to be able to bring a program back to its own building after whole-grade sharing. In other words, it should be considered as a prelude to reorganization or dissolution.

Historical Perspectives

Iowa has gone through many phases of school restructuring. During the Sub-districting Period (1872-1900), the township districts were allowed to break into parts. The all-time high was 17,522 districts in 1900. Since that time, the state has been trying to reduce the number.

The most recent round of restructuring took place between the 1952-53 school year and the 1966-67 school year. During that time the number of districts was reduced from 4,558 to 455. Most of the reduction involved the closing of the one room elementary districts. However, the number of high school districts was also reduced from 836 to 455.

The period from 1966 to 1985 saw very little restructuring activity. The number of districts merely declined to 436—about one reorganization per year. Whole-grade sharing was not a part of the process.

The changes of the 1950s and 1960s were largely brought about by legislative incentives. The only major direct action was to cause all territory of the state to be in kindergarten through twelfth grade districts. The reduction in the number of high schools was caused by a series of other measures. Among them were: (1) county reorganization plans required, (2) the ability to discontinue a school and contract with a neighbor, (3) appointing the county superintendent rather than electing that person, (4) mandatory county reorganization plans prior to reorganization,

(5) enforcing standards that were already in existence, (6) new reorganization chapter in the Code, (7) allowing county boards of education to join or merge, (8) new standards, and (9) the elimination of the two-year college teacher certificate. All of these put together helped bring about the massive changes.

Current Restructuring Activities

Whole-grade sharing has increased dramatically in recent years. There were ten districts doing this in 1985-86. That number increased to twenty in 1988-87, and then to forty in 1987-88. Eighteen more districts have signed contracts for 1988-89; however, six districts are eliminating contracts due to reorganization or dissolution.

The number of districts reorganizing has increased slightly. Four districts were scheduled to merge on July 1, 1988. As of January 1, 1988, several other reorganization and dissolution actions were pending. Some are at the election stage, and others are waiting court action or other procedures.

Although superintendent sharing is not a form of restructuring, it is a process that can help speed change. Simply stated, it is often much easier for two districts to restructure if they share the same superintendent, as opposed to two districts, each with its own superintendent. In 1986-87 there were 22 districts sharing superintendents. That number rose dramatically to 67 for 1987-88.

The number of districts contemplating or studying restructuring has increased greatly. In 1987, the staff from the Bureau of School Administration and Accreditation completed fourteen full fledged feasibility studies. During that one year period, the Restructuring Consultant personally visited with seventy boards, or sixteen percent of all districts. This amount of activity is a clear signal of the pending change.

Recent Legislative Activities

The Legislature has not passed acts that will directly cause restructuring. However, many of the bills proposed and passed are causing changes similar to those that took place between 1952 and 1966.

The State Board of Education was mandated to provide restructuring plans and to develop new standards. Obviously, it was expected for the new standards to be more difficult than the old ones, and that is the type of action that could cause change.

Over the course of several years, legislation was enacted to provide monetary bonuses to districts for sharing students, for whole-grade sharing and for sharing administrators. Tax breaks were given to schools that reorganize or dissolve.

A minimum salary of $18,000 was established. This is not intended to cause restructuring, but it will highlight the inefficiency of small districts that have very few children in classrooms. Can a regular sixth grade class

with only five children in it be economically operated when the minimum wage is $18,000?

The Department staff and some legislators are pointing toward the early 1990s as an era of increased change. A new U.S. Census in 1990 will illuminate the decrease in rural population. Reapportionment in 1991 will produce more urban and metropolitan legislators, who will be elected in 1992. The 1993 and 1994 sessions will possibly be much different than those of the 1980s. In any event, the restructuring movement, like all other historical movements, could run its course. Very possibly, 1995 might be the last year for change, with a plateau starting at that time.

Feasibility Studies—Basic Considerations

Pursuant to Iowa Code Section 274.38, 1987, the Department of Education conducts feasibility studies when requested by the local boards. Other Code citations provide for assistance to AEA boards. The studies are usually conducted by the Restructuring Consultant and the Accreditation Consultant who has responsibility for the area where the schools are located. These teams have developed a set of criteria to follow. Each school and each study is considered as a unique situation. However, there are common elements that seem to run through all circumstances.

The major considerations are population and demographics. The study involving a large district and a small district is viewed differently than one including two smaller districts. Schools located near metropolitan or other growing areas may have different futures than those supported by the farm population. In general, if it were not for population changes or for low population, restructuring would not be a major issue.

The next set of criteria are all considered together. They are educational program, geography, and long-term stability. The potential education program of restructured districts is of prime importance. If restructuring does not produce better educational programs, the effort to make the change is not worth the results. Geographical common sense is extremely important. Conditions, such as the dislike of the county seat, are not suitable reasons for the Department team to ignore decent boundary lines. When the year 2000 is upon us, the feelings and emotions of people will be changed and new people will be involved. Parents of the next century should not have to speculate why geography played a secondary role to personal prejudice when districts were established. Long-term stability is a very hard concept to study. In order to accomplish this, the study team establishes barriers around the districts being studied. Barriers are natural geographic barriers, such as the state border. Larger municipalities form barriers, and county or potential county districts form barriers. In other words, these barriers stop the domino effect from carrying the study to other districts.

Other criteria are examined during the study, such as tax rates, finances, buildings, roads, etc. These are important, but not as meaningful as

population/demographics, educational program, geography, and long-term stability. In other words, should a building built in 1960, be the major criteria for the existence of a district in the year 2000? These factors are generally more controllable by the state and by the local governments; whereas, population and long-term stability are not necessarily things that can be changed by government fiat.

Local/State Considerations

When conducting studies, the seventh part of the presentation to the board and citizens usually includes an analysis of the local situation. Since this report is concerned with statewide activities, a few generalizations are pertinent.

The natural progression method of school restructuring is working. Schools are changing. However, there are severe problems with this method. First, it is slow. Next, it is causing turmoil in the communities. We have seen the bitter fights and arguments first hand. The social fabric of a community can be torn apart by a reorganization effort. Even more of a problem are the poor alliances that are being put together. Often people from small schools will join with their weakest neighbor in an effort to maintain identity or to keep a building open. These efforts don't put together a large enough district, and the people run the strong risk of going through restructuring again. Also, districts frequently leave out neighbors. In some cases, districts are set aside by their neighbors and sheared of all good choices.

The Department staff working in this area have been in positions to see the activity like no other people in the state do. We have worked with small community groups, single boards of directors, gatherings of several boards, and crowds up to four hundred people. We have worked in districts of all sizes, at their requests. We have witnessed first-hand the turmoil and have seen the emotions of anger, sorrow, and fear expressed openly. Some people want the state to leave them alone. Others have implored us to give them guidance so they can improve their schools.

As we look back at the 1950s and 1960s, we can see that Iowans were expressing two messages. The one room rural schoolhouses were not doing a good enough job for the mid-century and every town did not need a school. What are Iowans doing now? It is much too difficult to analyze a significant piece of historical action when you are in the middle of it.

The suggestion of the Restructuring Consultant is that state officials become more concerned about what is happening in the small local districts and that state planning and policy be developed. Short of that, or short of forced reorganization, the problems of slow progress, turmoil, and poor planning will continue to exist. An idea that has lately been discussed is the existence of an "oversight body" at the state level. Its mission could be to help establish state goals, plans, and policies; assist local districts in their planning; and have the authority of veto over local plans that do not

conform to state policy. The last, controversial suggestion of an oversight body, is necessary if we expect the school district boundary map of the State of Iowa in the year 2000 to look like it was planned rather than just fallen in place from its own gravity. We need to understand that the children who began kindergarten in the 1987-88 school year will graduate in 2000.

Claudia Jones, President
People United for Rural Education

While reading this statement, you should be aware I have presumed three givens:

1. Rural schools in Iowa will be financed at a lesser rate than currently and that rate will be no less fair than it currently is.
2. There will be open enrollment in Iowa.
3. Current minimum standards will continue as they are to date.

Iowa has experienced a dramatic decline in students in public schools over the last 20 years. Rural Iowa in the 80's has suffered a severe economic crisis. These facts have created a situation that only those of us who live in rural Iowa can completely comprehend. We now have to deal with declining enrollment accompanied by rising fixed costs. Another factor that we have not had to confront in the past has to do with the higher poverty level in rural Iowa. That combined with more one parent homes has given us an increased number of at-risk students—something that has been very rare in rural areas in the past.

Because of the so called "greying" of Iowa, we are now facing a situation where often 25% or less of the people in our communities have students enrolled in public schools. In some areas this has caused problems in passing bond issues, enrichment taxes and often times coming to terms with sharing agreements and reorganizations.

This all sounds a bit dire to say the least but you must also know that rural people tend to be very resilient. They have more options than ever before. But even this will not save all schools in rural Iowa. I believe some reorganization is not only imminent but necessary. Only those schools with administrators and boards that are willing to view viable options as workable in their districts will survive the 90's.

As a parent, I can safely say that we have become more demanding of our local schools. Each of us expects our schools to meet the needs of our individual children not only academically and in extracurricular activities but also often times to meet social and emotional needs that have in the past been met in the home.

Schools face quite a challenge in the future, but many rural schools will be up to it. Whole-grade sharing in Iowa has increased sharply in the past 3 years. Before the '88-'89 school year there were 16 schools involved in whole-grade sharing. In '88-'89, 20 more schools joined their ranks. There are 80 school districts and 39 superintendents involved in sharing administrators in '88-'89. These figures will continue to rise as rural schools continue to achieve economic efficiency and expand academic and extra curricular programs. Many schools will look to sharing programs with merged area schools to meet vocational standards and needs. Sharing comes in many forms and I have mentioned only the most common but many communities will find new and unique ways of sharing if they are to

survive. An open mind will be the most valuable asset of community based schools of the future.

Hopefully, we will see telecommunications used more extensively in the future. This could be the most economic and effective way to offer enrichment courses in many rural areas. The mode of system should be left to individual districts because of the delivery needs of rural schools.

Economically, transportation has always been a major setback for rural schools and this will probably only increase if there is a dramatic reorganization movement. Sadly, this is a problem the Iowa Legislature has failed to confront for many years. We can only hope they may address this in the new foundation formula.

Open enrollment will not have a great effect on many rural districts but will require responsible parents to be more aware of local district programs if they are to make good choices. Those choices will go beyond where their children will be educated to addressing local problems. We as parents can no longer stand by apathetically and let people make choices for us. We must become a united voice in extolling the virtues of rural education.

I believe that professionals and others involved in Iowa's educational process have done an excellent job in providing quality education for our students while facing some challenging times over the last decade. I don't believe we are at the end of these challenges. I do believe that parental cooperation and involvement are very important in solving the problems of the future.

Marvin Judkins, Superintendent
Coon Rapids-Bayard Community School District

Iowa has historically held firmly to two basic, but contradictory assumptions about its schools. The first assumption is that Iowa's schools and their students are the best, or at least among the best, in the nation. The second assumption is that Iowa has too many small schools to provide a top quality education for its students. The past decade has witnessed an unprecedented attack on the quality of education provided by Iowa schools. The roots of that assault may be traced to two factors.

"A Nation At Risk" created a national concern with the quality of education provided children. While most of the issues and concerns about the quality of education raised by "A Nation At Risk" do not apply to Iowa's schools, Iowa schools have been victimized by this and similar reports. The second factor is the economic recession in the upper Midwest which had an especially negative impact on Iowa's economy in the mid 1980's. Declining state revenues and declining populations have raised valid questions about the efficiency of schools, specifically small schools in Iowa. These two issues, educational quality and financial efficiency have become intertwined and often confused.

The combination of these two issues has given rise to the current concern on redesigning Iowa rural schools. The basic questions are what is the minimum acceptable quality of education available to each student and how much will the residents pay for that education? Almost every Iowa school can provide services to meet the unique educational needs of all individuals if the financing is made available. Extremely small schools can not do that cost effectively.

Iowa schools must face some fundamental restructuring before the end of the twentieth century. This restructuring is made necessary by both issues of educational quality and economic efficiency. We must focus on how educators can best redesign Iowa rural schools or face a new design imposed by non-educators. The question is no longer the desirability of merging school districts, but the best method of effecting those mergers. While it is generally recognized that there is a need for additional merging of schools, there is not agreement on the extent of the needed mergers. An ideal number of schools is not easily identified, and much depends on the sparsity of the population and the distance students must travel.

Increasing school size does not guarantee improving the quality of education provided our students. Efforts to improve the quality of curriculum, instructors and administrators must be improved and continued regardless of school size.

While the major focus of this position paper will be on evaluating methods to implement the changes, not on debating the merits of the need for changes, the basic need for those changes needs a brief examination. A reliable, valid statistical data base for comparing the quality of education provided by the schools among states and within our state is only partially available. A necessary prerequisite to developing an effective restructuring or consolidation plan is the development of a valid data base to allow

more informed decisions on school restructuring. It should be designed to provide better definitions of the actual quality of education currently provided and to determine a correlation between school size and student achievement. Basic assumptions for this paper are partially supported by existing data but are mostly devoid of supporting or contradictory data. Existing data supports the contention that Iowa students are among the best in the nation. Unfortunately there are many voids in the existing data. Existing data indicates that Iowa schools with a K-12 enrollment of about 600 are the most efficient economically in the state on a cost per pupil basis. The U-shaped cost per pupil graph is probably caused by small schools being less cost effective and significantly larger schools offering more programs to meet the unique educational needs of students who vary from the norm and paying higher salaries to professional employees.

Three basic options for combining educational units are now available to Iowa schools. Sharing students, teachers and/or administrators is one option now encouraged and generously supported financially by the state. This option provides an excellent short term solution to the financial problems facing small schools. Sharing teachers and administrators is financially rewarding to small schools because of the potential of more efficient utilization of staff and increased state funding for shared employees. This also allows teachers to specialize in specific teaching areas. Sharing students on a whole-grade sharing basis also has these same advantages plus the additional advantages of increasing the potential for positive peer interaction. Advanced or special need classes can be offered much more efficiently in combined programs rather than in the separate schools. These sharing options can demonstrate to patrons of local schools that consolidation is in fact feasible.

The basic weakness of sharing arrangements, especially whole-grade sharing is the effective disenfranchising of a large portion of the voters in the school population. When students are sent to other districts, local voters in the sending district lose the opportunity to elect the board of education that makes the fundamental policy decisions affecting their students. While a short-term sharing arrangement is justifiable and desirable, this voter disenfranchisement for an infinite period is untenable. Whole-grade sharing agreements that involve only the higher grade levels also allow the continued existence of inefficient class sizes at the non-shared grade levels.

Restructuring and/or consolidation of existing schools are the remaining long term solutions and are also generously supported financially by the state. Larger school districts can result in fewer teacher preparations at the secondary level which should allow more time for each preparation. Increased number of course offerings for all ability ranges should be possible. Students should be challenged more through greater interaction in courses with students of similar ability. Additional special service programs should be more affordable. These improvements in the educa-

tional opportunity of students can often be attained without cost increases due to the greater efficiency of operation of the larger school district.

The best method of improving the schools in Iowa is probably a combination of restructuring and consolidating. Geographic distance and travel distance are valid concerns in school mergers. Consolidation, regardless of the source of the mandate for the change, should be designed at the local level. However, while supporting local control of the restructuring of schools, it is recognized that locally designed restructuring often does not result in the best possible educational arrangements because of old rivalries, local economic concerns and local pride factors. To maximize the arrangements, some school districts need to dissolve instead of merge so that distance and travel factors are minimized.

Even if school districts are restructured or merged so that all schools have a feasible minimum enrollment, further restructuring and sharing might be necessary. Our students have a wide variety of individual needs, and those needs should be addressed by the local school district as much as possible. The reality of sparsely populated portions of Iowa make it impossible to develop combinations large enough to allow schools to meet the needs of some special students. Even schools with moderate to large enrollments cannot always meet the needs of all students efficiently. In those unique situations, county-wide or even multi-county sharing arrangements to provide special educational opportunities are needed for a few special students.

A major dilemma is created by the perceived need for an accelerated rate of school consolidations and the seeming inability of too many schools to approach that task from an educational instead of a local economic perspective. While there appears to be few locally generated merger attempts, a lack of confidence in ability of state agencies to design feasible plans meeting the needs of the local students prevents the recommendation for a state level plan.

Iowa schools are not receiving proper credit for providing a quality education, but at the same time they are reacting too slowly to the school consolidations that are needed for educational and economic reasons. Excellent short-term solutions, such as sharing, are being utilized, but the long term solutions of school consolidation and restructuring are proceeding too slowly.

Alan Meyer, Superintendent
Schaller Community School District

The process for the redesigning of the Elementary and Secondary Schools of Rural Iowa has been going full bore for five years now. Encouragement in the form of legislation, financial incentives and mandated administrative rules have created a flurry of activity in rural Iowa that is unprecedented since the early 60's. The impetus for this flux has been the notion that too many administrative units exist in relation to the numbers of students being served in 1988 as compared to 1976. The outflow of families that has occurred since 1976 has caused a readjustment of state deliveries in many areas of services and now greater emphasis is being placed on education, from Kindergarten to the Post-graduate programs of our universities.

The unique concept of sharing was developed at the legislative level through encouragement of rural citizens (P.U.R.E., People United for Rural Education) to assist with dwindling resources and student numbers. The concept holds that through sharing of resources and students, two or more contiguous school districts can provide quality and equitable programs while maintaining their individual identity as a community and as a school district.

Iowans tend to be a very progressive lot unless it threatens the security that is developed through the stability of the past. Sharing to a certain extent threatens that mantle of security but yet leaves one with something that is basically their own, a patch-work quilt if you will, that is shared out of common labor and love but not totally possessed by any one community. It is a quilt that can be undone and reassembled with other blocks if need be.

Consolidation or school reorganization, however, is looked upon as a finished product, an item that is as definate as death and taxes. It does not provide a time for adjustment as does sharing, nor does it provide a locally guided base as well. In sharing, each district has its own board of directors, however, in consolidation a new board is established that represents the two or more districts involved; an item that is seen as a weakening of local input and control at a time of great *social* and *education* upheaval.

In rural Iowa, the school has been and still is a focal-point of social interest and activity whether negative or positive, and the educational opportunities therein are seen as an integral part of the fabric of each community. Schools are held in high esteem by the rural communities and participation is very high in *all* school related activities, academic, sports and other extra-curricular. Satisfaction seems to be high in the communities when one reviews the lack of candidates at local board elections, an assumption by many that things might be going according to Hoyle. This strong base of support, an integral part and the most important element of any educational program, is threatened when schools are thrust together unwillingly through openly mandated consolidation. A better vehicle to obtain the same end is through a process that effects the same change. Sharing is that vehicle, once it is embarked upon, there is not an avenue

for retreating to what was. All participants see that sharing is a commitment, the choice is to which partner or partners the districts have chosen or accepted. Sharing is not locking one district into the boundaries of another specific district but provides the option of seeking other partners in a variety of optional issues that enables each district the choice of direction. The end results will be reorganization if successful, or dissolution if not successful. The decision is local and not state.

It is my contention, that financial incentives for shared programs and reorganization should be continued. It is an acceptable manner or mode that meets with less resistence by the public and still achieves the ultimate end of consolidation. If the legislature, governor and the Department of Education feel that strangulation of small rural areas is the desired outcome for education, an item not founded in research, then sharing is the least painless and bloody.

Section VII
Staff Development and Rural Schools: Ways and Means

Introduction

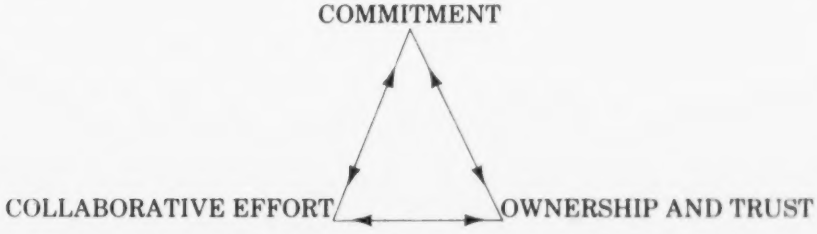
The papers written in this section discussed both preservice and inservice staff development. They covered the need for, as well as concerns about, staff development. Descriptions of programs which have been implemented were written about, and suggestions based on staff development literature were posited. This introductory statement is a summary of the group discussion in which the writers of these papers participated. The members of the group decided to look for the major themes found in the papers. The two themes which emerged were: a) elements of effective staff development in rural schools and b) the concerns about staff development in rural schools. After discussion of the themes, the group developed a set of recommendations about staff development in rural schools.

The group reached consensus on a list of eight desirable elements of staff development programs. No attempt was made to define these elements. However, the group operated on the assumption that staff development was a desirable commodity in rural as well as urban districts. The eight elements are as follows:

1. *COMMITMENT:*
   There are actually two parts to this element:
   a. Commitment *BY* the board, administration, and teachers
   b. Commitment *TO* the program itself, financial commitment, and commitment to release time, inservice days, etc.
2. *GOAL-DRIVEN OR FOCUS-ORIENTED PROGRAM:*
   The program will be context dependent. It could involve a needs assessment to determine the focus and will address the on-the-job needs of participants.

3. *"IN-HOUSE" PARTICIPATORY EXPERIENCE:*
   This element is in direct contrast with the staff development program which is generally an expert presentation/lecture resulting in a passive experience for the staff members. That type of "single-shot" program is generally ineffective. The participatory experience would involve peer groups, collegial teams, or quality circles.
4. *MAINTENANCE AND EVALUATION:*
   Maintenance and evaluation must be built into the program. Follow-up and an opportunity to practice are essential. The feedback could occur in the team setting. Evaluation of the program and of the participating staff members is also an important part.
5. *COLLABORATIVE EFFORT:*
   It is necessary to involve the staff in the planning as well as serving as in-house trainers. This mutual collaboration leads to the next element.
6. *OWNERSHIP AND TRUST:*
   The collaborative decision-making process fosters a high degree of ownership and trust.
7. *SHARED RESOURCES:*
   Rural educators need to consider shared resources and it is advisable for two or more districts to combine for staff development programs.
8. *ALTERNATE SOURCES:*
   Rural districts also need to consider alternate sources for delivery of staff development programs. Some possibilities include area education agencies, grants, and telecommunications.

A model which the group developed emphasized three of the elements which were felt to be interrelated and necessary for effective staff development.



The group then listed the ten following concerns that were believed to impact a staff development program:

1. Geographic location from inservice resources:
   a. University
   b. Consultants
   c. AEA

2. Cost efficiency related to number of teachers: many inservice programs cost several thousands of dollars. The smaller the system the higher cost per teacher.
3. Cost efficiency related to area of teacher expertise: problems with teachers teaching outside their major and the fact that it becomes difficult to provide subject area inservice.
4. High turnover: many rural schools have to hire first year teachers who have a tendency to work a couple of years and then move on to a larger system.
5. Budget concerns: concern about the phasing out of shared incentives. Several schools are using their shared funding to hire curriculum directors who are also responsible for staff inservice.
6. Time is an important factor: a) instructional time takes away from students, and b) actual time to conduct the staff inservice program.
7. Determining the focus of inservice program: how to select a particular inservice program for the school. Processes need to be established for needs assessment.
8. Availability of quality substitute teachers who could be used to "free up" regular teaching staff to participate in staff inservice with the least amount of disruption of instructional time for students.
9. Rural staffs may react to changes at a slower rate because they may view the inservice program as being a "fad."
10. Major concern is the development of a method that could measure the effectiveness of the inservice program on student performance and staff improvement.

Finally, the group generated the following recommendations for staff development in rural settings: a) fiscal commitment, b) district staff development coordinator, c) rural school networking, d) implement a district model, e) evaluation and report results, and f) preservice (student teachers) placement in rural schools.

Andrea Bowman, Assistant Professor
University of Northern Iowa

Staff development is generally viewed as a moderately structured "event" which occurs in an actual contracted teaching situation. Staff development can also be seen as a pre-service "event." The focus of this paper is on the staff development which occurred during a student teaching experience at Green Mountain School.

The setting in which student teachers are placed generally determines the kinds of settings for which they will best be prepared. Following that logic, any setting can be somewhat limiting. A primary consideration is whether the limitations imposed by student teaching in only one setting become a liability to student teachers. Secondly, do those limitations become a liability to student teachers placed in a rural setting any more than to those placed in an urban setting? These considerations need to be thoroughly explored before we can understand the whole picture. The case study presented here is one small part of that picture and supports the desirability of placing student teachers at Green Mountain School. There is no attempt to generalize this support to all rural settings, but to describe a student teaching experience in a particular setting under particular circumstances. The case study does present some direction for further study.

The perceptions voiced in the study are those of the student teachers, the cooperating teachers and the student teaching coordinator/researcher. These voices were captured through interviews, dialog, and through observations.

Background

Setting. Green Mountain School is located about eight miles north and east of Marshalltown, Iowa. Until recently, one building housed the entire K-12 district. Currently, Green Mountain District and Garwin District share facilities. Each district maintains an elementary school. The students of middle school age from both districts are placed in the Green Mountain School, and the high school students from both districts are placed in Garwin.

The Placement Process. Student teachers from the University of Northern Iowa (UNI) had not been placed in Green Mountain School previously, so this was a new experience for everyone involved — the administrators, teachers, student teachers and students. The process to place the student teachers there began in the fall of this current school year when the UNI student teaching coordinator for the Marshalltown area contacted the superintendent about the possibility of placing student teachers in Green Mountain School. The response was extremely positive and a time was set to discuss that possibility with the superintendent and principal. After some discussion about the number of student teachers which would be desirable, dates were set for in-service activities.

Many of the teachers had expressed an interest in having a student teacher. All of the elementary teachers and the principal participated in

in-service activities which took place during the semester before the student teachers arrived. These activities were facilitated by the UNI student teaching coordinator and were designed to provide some background information about student teachers in general, and to present and interact with the participants about the UNI student teaching program.

The student teachers. There were two student teachers placed in Green Mountain School for the first nine-week quarter of the spring semester. Both wanted to student teach there because they felt that that particular setting would resemble most closely the kind of setting in which they desired to teach. One grew up in a rural community and felt very comfortable in that setting, and the other currently lives in a rural community and had plans to stay there. Both were non-traditional students.

The teachers. The two cooperating teachers had not had student teachers previously and both expressed an excitement about the possibility of having a student teacher. They both felt that they had a lot of teaching experience they could share with students becoming teachers. One of the teachers wanted to share enough of the realities of teaching, both the good and the not-so-good, that the student teacher's first years of teaching would be easier. The other expressed a desire to enhance the teaching profession by helping to prepare more good teachers.

A Support Network. The student teachers placed at Green Mountain School were a part of the Marshalltown area student teaching support network and met with that group for seminars and for other projects designed to help their teaching. The cooperating teachers were also included in a support network among Marshalltown area cooperating teachers. The response to participating in these groups was generally positive.

Perceived Advantages

Direct Advantages. Neither the student teachers nor the cooperating teachers sensed any liabilities involved in student teaching in a rural setting. In fact they each expressed views about the advantages of student teaching in a rural setting. One advantage was the fact that the school and community were very interdependent and there were community activities, such as games and community-wide dinners, in which they could participate. Because of such a close interdependence it was felt that the school had greater accountability to the community. Similarly, the student teachers were able to observe the interdependence found in an entire school system, from the superintendent to the students.

They felt that the atmosphere was more relaxed and that because of that they were able to be more spontaneous and flexible in their teaching, to take more advantage of that "teachable moment," and to take into account the students' understanding before proceeding with a lesson.

In addition to the advantages for the student teachers, the cooperating teachers found that there were advantages in having student teachers in

their classes. The students were able to receive additional help, and the teachers learned from the student teachers. The teachers found it very satisfying to help a student become a teacher.

Indirect Advantages. There are some limitations in a rural setting, such as smaller classes and a more manageable population of students. However, these were not viewed as limitations, but as opportunities to learn things one might not learn in a larger school population. For example, the student teachers were able to concentrate on how to keep a class motivated by varying activities, rather than having to figure out how to "keep control." They felt that they had a better opportunity to learn to "teach."

There were also some misconceptions about schools in a rural setting. There was a concern expressed that there might not be as many resources available as in larger districts. However, the student teachers found out that the Area Education Agency provided many resources, including computers for the classrooms and a computer lab. There was also an expectation and concern that the students in the school would all be very much alike. The student teachers were pleased that they had students in their classes with special needs, a few with cultural differences, and, of course, with a wide variety of learning styles and individual differences.

Summary

Student teachers placed at Green Mountain School experienced the teaching "duties" expected during a student teaching experience. They planned, taught, and evaluated a full range of curriculum for a moderately diverse student population. They participated in extra-curricular activities with students. They also attended and participated in staffings, faculty meetings and staff development, in-service activities with the teachers.

While they did not have the experience of dealing with some of the challenges found in many large districts, there were many perceived advantages to student teaching in Green Mountain School, for both the student teachers and the cooperating teachers. This experience was very positive.

Richard Caldwell, Superintendent
Lohrville Community School District

Rural schools, such as Lohrville, are as committed to the achievement of academic excellence for its students as any urban school. Therefore, it is very important for every rural school in Iowa to provide a quality staff development program for its teaching staff. At one time it was thought that teaching was an art and you could either do it or you couldn't. However, there are too many studies showing that teaching is not necessarily an art, and with proper instruction all teachers can increase their effectiveness in the classroom. Since 1972, several of these studies and research projects have directly linked student achievement levels to the specific abilities of teachers to do such things as: improve student behavior through use of reinforcement techniques; increase student motivation to learn by using motivational techniques; make the lesson more productive for students through better lesson design; and make students practice more effectively through the application of learning research. At Lohrville, the Board of Directors feel that the real key to how successfully students learn depends on how effectively the classroom teachers transmit their information to the students in the classroom. Therefore, if the school is going to do the best job in educating its students, a strong staff development program has to be instituted by the school district.

This need for commitment to staff development is probably greater in smaller rural schools because of the higher rate of turnover in staff. Small schools have trouble competing with larger schools for the experienced teaching staffs. Usually, many rural schools have to hire the first year teacher. Through my twenty years of experience and observation, most of these young teachers have not been given a strong background on how to teach. Most of their time has been devoted to the learning of subject matter. As an example, other than subject matter, every teacher, whether elementary or high school, should be taught how to teach reading to the age group of his/her teaching endorsement because if the student can't read, then it becomes much more difficult for him/her to learn and to be successful in our society. If the college does not develop this skill in depth, then it becomes the responsibility of the local school to help provide the needed skills to the teacher. This can be done by a staff development program directed by the local school district.

Unfortunately, the Lohrville Community School, like most other smaller schools in Iowa, finds it difficult, if not impossible, to provide the comprehensive, on-going staff development programs that could give teachers the skills that would really make a difference in how students achieve in school. The key word is on-going staff development. Rural schools are going to have to select an area of staff development that will best fit the needs of their district and students, and make a commitment to work with this program every year making the necessary alterations each year in the program to keep it up-to-date. For this to occur, the building principal becomes an important part of any staff development program. It will become necessary for the principal, as instructional leader, to train

any new staff members in the staff development program and bring them slowly up-to-date with the rest of the participating staff members. Therefore, each year should begin with all staff members reviewing the major concepts of the staff development program.

A successful staff development program must be one that is spread out over time and involves several training sessions throughout the year. This would solve one of the main problems with several available staff development programs. They are usually "one shot" presentations for teachers who are then expected to put the program's new idea or concept to work in the classroom. Research shows us that this concept does not provide quality results. Teachers need to be exposed to a new idea or concept and then given time to practice it in the classroom. Along with practice, the teachers will need positive reinforcement from either peers or administrators when using any new materials or concepts presented by the staff development program. They have to feel that its all right to fail the first time they try the concept in the classroom and not have to worry about the principal chastising them.

There are several reasons why staff development is one of the biggest problems facing rural schools in Iowa. First, the staff development program has to have a strong vision and commitment by the Superintendent and Board of Directors of the school district. Good programs usually involve a commitment of general fund dollars by the district. Secondly, some of these available staff development programs can be very expensive for a small district to finance, especially with the limited funding the legislature has placed on the rural school for allowable growth. So, the Superintendent and Board of Directors of the district must search out ways to generate enough funds to finance a good staff development program. One way funding can be accomplished is to gain board support to write an Educational Improvement Grant. The Educational Improvement Grant allows the school district to increase property taxes to help pay the extra cost of the selected staff development program. The Phase III committee could direct some of its funds toward a staff development program. However, more and more of these funds will need to be directed toward performance-based salary programs which was the main reason for the Phase III dollars. Or, another way is to expand on the shared school concept and share the cost of a comprehensive staff development program with another school district that is close by. Because rural teaching staffs are usually small, two or more schools could, for this purpose, be combined and still not create an audience too large for a single presentor to work with in a staff development program.

Thirdly, staff support is needed before a good staff development program can be put into place within a school district. Without the commitment of the administrative and teaching staff to the program, it will not be successful. The staff has to be provided adequate information and given school time to work on the staff development program. The teachers will need to be shown how the staff development program will make teaching

better for themselves and their students. All the staff may not make a major commitment the first year. However, even a nucleus of teachers will profit from the staff development program. If the program is on-going, more and more teachers will become actively involved in the staff development programs as other teachers talk about their successes in the classroom with the students. It's a proven fact, 99% of the teachers want to do their best job of teaching; however, some just lack the tools needed to transfer the necessary information to the students.

For this reason alone, it is very important for every school in the state of Iowa to develop and provide a comprehensive staff development program for their teachers and administration. We need to provide every opportunity for all teachers in Iowa to be more successful in the classroom which will hopefully lead to increased student achievement and student success.

Marilyn Heilman, Board Member
Eastwood Community School District

The need for staff development that would improve teacher effectiveness and increse student learning is a universal need for school districts in Iowa. The need in rural districts is especially critical because of the existing danger of low morale among staff members. News reports about the so-called inferior quality of "small" schools probably contribute to this attitude. The pressure to meet pending state standards can be overwhelming to small staffs in rural communities and also may be a contributor to the morale problem. Limited funds have been a factor in the lack of appropriate staff development that could counter-act the problem.

It is generally recognized by educators and members of the general public, that the key to a quality education is a quality staff. Well-trained, enthusiastic, and energetic teachers do more to enhance a child's education than any other single factor. Many of the teachers in our schools are very competent and do an excellent job but people do change and may become static. Thus, a staff development program with an emphasis on improving teaching skills is imperative if we hope to maintain quality education in our rural schools.

The components of an effective staff development program are the same for a small school as they are for a large district. Effective programs include these common components: (1) commitment to the program by the board and administration; (2) articulation of clear and specific goals which address on-the-job needs of the participants; (3) compatibility of program objectives with district goals; (4) involvement of staff members in collaborative planning of program content and as in-house trainers; (5) opportunities for staff to practice new skills; (6) collegial observation and feedback; and (7) utilization of local facilities for training purposes. Examination of these components indicates that they should be within reach of every rural district in Iowa.

A staff development program that utilizes these components is a process that takes place over a period of time and goes through several stages: (1) building commitment, (2) planning for long-term change, (3) training, (4) implementation, and (5) maintenance. Teachers often view the traditional in-service meeting as a waste of time. There is no follow-up and, as a result, no positive impact from these "single-shot" programs that are not part of a staff development plan. Without the necessary incentives or support, administrators and teachers in rural areas may be tempted to fall into the trap of the "single-shot" approach to staff development because it may appear to be the easiest and least expensive way to meet in-service requirements.

Staff development committees in many districts are charged with the responsibility of studying various programs and selecting those which appear to be most appropriate for the district. Giving such a committee decision-making authority fosters a high degree of ownership and accountability in the group.

An economical way for rural districts to approach staff development would be the formation of collegial groups or teacher support teams. These groups could generate their own needs and become their own delivery system. In essence, the plan becomes teachers teaching teachers in a form of peer coaching. First-year teachers, as part of a team, would have a built-in mentor system. Team members could be video-taped by a non-evaluative person and then self-evaluate their own teaching using a group-designed form or checklist. In such a process, people are energized into a change mechanism within their own buildings.

A variation of the collegial team approach would be to implement a visitation program. Teachers would visit teachers in other buildings/districts to observe, share, and discuss specific successful strategies. The visiting teacher would write a personal statement regarding the visit to share with the team. Another low-cost variation would be "telephone time" with other teachers of the same level/discipline once a month.

If it is desirable to bring in nationally-recognized presenters, it is advisable for two or more rural districts to share staff-development programs. Project S.E.E.D.S. (Student Excellence through Educational Development of Staff) is a three-year cooperative partnership between four rural Southwest Iowa schools. This project utilized several prominent presenters and offered extended contracts and release time for staff cadre members. A.E.A. consultants also participated as group facilitators at certain points in the training sequence. The project was funded by a grant, A.E.A. incentives, and a $5,000 outlay by each district (Richardson, 1985).

College credit often serves as an incentive for voluntary participation in a staff development program especially if it precipitates an advance on the salary schedule. Many colleges currently offer courses on weekends and would quite likely be willing to expand these opportunities to enter into staff development agreements that would benefit both institutions. One such program is the Regional Consortium for Professional Development formed by the University of Alabama and twelve Alabama school systems. Because graduate school credit is an option, the University pays for the cost of conducting the workshops — and that means no cost to consortium districts. Teachers pay tuition fees to participate. There has been an overwhelming response to these weekend workshops that are offered at central locations (Condra, 1986). This type of arrangement has real possibilities for rural schools.

Phase III monies have had a great impact on staff development in the rural schools of Iowa. Rural school advocates must lobby for these funds to continue in order to maintain the current momentum for improving teaching skills.

The Educational Improvement Allowable Growth Grants are available to each school in Iowa through applications to the School Budget Review committee. Some Area Education Agencies — A.E.A. 13, for one — have designated educational improvement incentives for districts that have developed an effective school plan.

Boards of education of rural districts need to be aware of the importance of staff development in their individual districts. There must be board commitment for funding as well as for release time, substitutes, and inservice days in order for such a program to have the desired impact on teachers and students.

Goal-based evaluation seems to be a natural partner with staff development programs. Individual teachers could set personal goals which they work to achieve through a workshop or a collegial team. Administrators could outline a program of minimum expectations for teachers who are having problems or resisting staff development opportunities. Eventually, the evaluation could be made on the actual changes that have taken place.

The threat of a possible open enrollment law, which could be detrimental to rural districts, may provide the impetus for aggressive and productive staff development. Teachers are the most important resource in the educational delivery system; therefore, rural districts must invest in them via professional growth programs.

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Harold Pruin, Superintendent
Lawton-Bronson Community School District

I will relate my position on the state of staff development in rural schools from the perspective of my past experience, what is happening now, and what may be in the future.

The Past

My twenty-one years in eight different rural schools in Iowa have seen staff development change from lip service only to a present scramble of sorting through the maze of where to go from here.

Starting in 1967, staff development was a day in Des Moines when all teachers in the state attended the ISEA Convention at Vet's Auditorium. As a rookie principal, I remember working with the superintendent on some staff development material he was working on through Iowa State University. We used some resource material on improving teaching provided through the tri-county superintendent's office.

When I had my first experience at a national principal's convention I "stole and borrowed" what staff development materials I could get because there was no money in the budget for such frivolous pursuits. In 1975, the advent of Area Education Agencies led to promoting and supporting staff development for rural schools. While there was still no money in the local school budget for system-wide emphasis, the educational services branch of the AEA made certain opportunities available.

In one rural school we had a counselor who would get excited about educational improvement. She would sell me on how we could improve our school and students and talk me into providing time, money, and my organizational skills as superintendent to the project. We involved the cooks, janitors, and bus drivers for our staff development programs. In a rural school, one involves everyone because there is a feeling of family involvement. Having K-12 all in one building made articulation natural. AEA consultants told us we often got more done in rural areas than in an urban district or at the AEA Staff Development Day that all teachers attended. Staff development in rural areas centered more on fragmented curriculum areas before the AEA's introduced a concept toward whole system development.

Ways and means in rural schools during this twenty year period of 1967 to 1987, centered on the individual school and whether its administrators were willing or inspired to do some staff development.

The Present

Today can be measured by the January visit I had with a regional consultant of the Department of Education. During this one-day "educational audit," our working budget was examined to see if money had been budgeted for inservice and what was being utilized. The Phase III plan was also analyzed to see where and how staff development was being actualized.

I asked what was happening in the rural schools in AEA 12. He mentioned the influence of Phase III for staff development and its main effect of getting teachers to take classes. With funding available, staff development is happening. The development of Phase III plans has opened the discussion between school board members and teachers on the effectiveness of staff development.

At the present time, ways and means are answered by the positive effect of state leadership, AEA's, and Phase III dollars. Many rural districts are able to adjust more quickly to the new state standards and without as much red tape as the urban districts. Since rural schools have already been sharing athletics, academics, and administrators, it has been a natural step, and more cost effective, to poor resources for staff development.

Presently, the state-mandated staff development guidelines are the dominant force in the type of programs that are being presented. We recently organized a Student-At-Risk inservice program in cooperation with two contingent school districts.

The Future

I base my projections of the future on my own feelings and a recent interview with the instructional services coordinator for AEA 12.

Research indicates that the most effective staff development occurs when you utilize local leaders trained over a period of time. At Lawton-Bronson, we are utilizing a team approach with the principals and our own locally trained staff. We are letting each building decide their needs and own staff development program to address those areas.

I am frustrated with the 100,000 "dog and pony" staff development programs available today. Some programs work and a lot of them don't. We will reach an exhaustion point in the very near future. Like the weather in Iowa, if you don't like the staff development program we are using today, it will change tomorrow.

Summary

The answer to the ways and means question of staff inservice can be simply stated by the formula: *Phase III dollars plus state expectations equal staff in-service rural or urban.* When the political marriage that allowed Phase I, II, and III was made, the horse trade was that dollars will go for education as long as the state gets something back to show for the investment. Staff development is education's trade horse.

The programs that will survive in rural schools will be the ones that have the principal as the quarterback, utilizing staff input and ownership, networked with neighboring rural schools, and tied-in with building goals and staff evaluation.

Some rural schools are thinking about hiring a full time substitute who would also be responsible for staff development. It's a wild idea, but probably necessary for programs to survive and be effective. Rural school

boards would really be making a commitment if they would consider this approach.

At Lawton-Bronson we are completing two years of using the Kelwynn model for school improvement, which uses the effective schools research. This was my first experience with a school district who had actually applied a planned and organized total system to staff development. This was brought about by a combination of an aggressive advisory committee and superintendent support. This staff development committment followed the governor and legislatures "First in the Nation in Education" report and similar reports by the Department of Education, Iowa's Area Education Agencies, and regional groups such as NCREL. This combination of input causes a board to put real and significant dollars into an organized and validated staff inservice model. *Being rural no longer appears to be an obstacle to staff development, perhaps it is an asset!*

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Richard Roach, Superintendent
CAL Community School District

My position on the ways and means of staff development in rural schools is similar to the ways and means of staff development in urban schools. Rural education has its peculiarities: sparse population, high transportation costs, low drop-out rates, high test scores, low pupil-teacher ratios, high parental involvement, strong moral values, etc. I don't consider, however, the opportunities for staff development in rural schools to be at a disadvantage. The need is equal between rural and urban schools, and our access to quality programs and presenters through Area Education Agencies (or ESU's, Coops, etc.) are just as profound as that available to urban schools. Some of the latest staff development programs have not only reached us in rural America, we are utilizing many of them such as: TESA, Coaching, Cooperative Learning, Whole-Language Approach, Clinical Supervision, and others. The availability of knowledgeable speakers in the area and in the state has not been a problem. We have encouraged our staff to attend professional growth activities; we average seven days per year per teacher strictly for staff development/professional growth.

Although "real-live" guest speakers and presenters are a popular way of providing staff development, I am not convinced it is the most effective form of improving teacher performance. Considerable amounts of time and resources may be devoted to securing guest speakers/lecturers, and recent research indicates staff persons may transfer only about 5% of the newly learned skill/concept on to the students. The research goes on to say we not only need to understand the theory, we need to demonstrate the skill, then practice and more practice, and finally we need direct coaching from peers or supervisors. A continuous follow-up as described here could raise our effectiveness level to about 90-95%.

A not-so-popular way and means of staff development, and one that is as old as the books, is through professional literature. No matter what size school one operates, it is important to know what research says about the various teaching strategies, methods, specific content areas, grouping, etc. As a rural school, we have access to all the credible literature, such as Kappan, Educational Leadership, (ASCD), Instructor, Learning, Classmate, Math, Computer, Oasis (talented and gifted), and the Education Week newspaper. If there is a special request we are anxious to obtain whatever additional reading material is needed. Professional reading is an under-rated form of staff development and provides teachers an excellent opportunity to learn what teachers (and students) in other parts of the country are doing and what "experts" are saying about school improvement. Rural schools can benefit greatly from this form of staff development.

The use of video-tapes is becoming an excellent means of growing professionally. We have recently viewed "Pitfalls of Textbook Adoption" by (ASCD) and "Effective Staff Development." These video-tapes are usually hosted by communication experts and contain effective visuals. We are able to obtain a wide selection of staff development videos through the

Cooperative Network Inservice Resources, a cooperative project of the AEA's and the Iowa Department of Education. Films and kits are also available through this agency, and there is no additional charge for this tremendous service. The use of this media enables us to focus on one particular aspect of staff development that we believe to be most important, and allows us flexibility in scheduling. The use of technology for staff development is moving to the point when we will be able to see, hear, and communicate with the presenter through video cameras, microphones, and monitors (a form of telecommunications). Rural schools may very well be leaders in this form of staff development.

Staff development is accessible to rural educators through college or university courses; a very logical means for improving professional skills. In our situation, we are within commuting distance to Iowa State University and the University of Northern Iowa. Both universities, and other colleges, oftentimes offer satellite courses that are geographically more convenient. This method of staff development is also an incentive for movement on the salary schedule.

Although our existing school calendar has created some staff development restrictions, during the 89-90 school year, we plan to schedule a two-hour block of time once per month to conduct professional development activities and "Quality Circles." This will be an excellent opportunity for small groups of teachers to meet and share an idea or technique they learned at a conference they attended, or professional literature they read, or even discuss problems they may have in the classroom and seek solutions from peers. Quality circles may be the most personal and meaningful form of staff development available to rural educators.

When we speak of staff dvelopment many things may come to mind: professional growth, instructional improvement, learning, meetings, etc. The one concept that is not talked about often when we deal with staff development is "change". Staff development is growing professionally, learning, improving our abilities and techniques with children. In order to effectively do this we must "change." We must discontinue doing something the way we've always done it and begin doing it a new way (changed behavior). We must apply the knowledge we've just learned in a way that students understand. Change is the key, and it is the most difficult aspect of true staff development. It is not enough just to learn something new about our profession — we must apply it to the point where it becomes natural. Rural schools may have an advantage in initiating the necessary change for effective staff development. We typically have community-based education. There is more of an informal setting. Teachers, administrators, students, and parents maintain a close relationship in and out of school. Change comes from trust, without it, it may not blossom. A small rural school may be more apt to produce a sense of trust because there probably is less bureaucracy, more personal relationships, a greater response to needs, and the traditional rural work ethic that says everyone must pull his/her own weight. If there is ever any real disagreement as to

whether rural or urban is more apt to create a sense of trust, we could always count the unlocked doors.

In conclusion, there is definitely a way and means for staff development in rural schools. It is very available, accessible, and highly participated in by rural educators. We realize the importance of staff development in maintaining a progressive school-community, and we plan to continue.

Daniel Smith, Superintendent
Knoxville Community School District

Attributes of Quality Staff Development Programs

Staff development programs which are of high quality exhibit several characteristics. First, they are research based. As a result, they are not based on a current fad or on the whim of a group of school administrators. Good programs have a mass of verifiable data to indicate that teacher participation in the program will have a high probability of improving the service he/she provides to students.

Second, quality programs are focused. The research-based components are carefully selected and consistently reinforced. Good programs are not merely one-day inservice activities that deal with a single topic in isolation from other topics. There are a series of activities focusing on clearly defined topics, where the interrelatedness of each topic is stressed.

Third, the specific topics are arrived at through mutual collaboration between the teachers affected by the program and the administrators responsible for directing the staff development process. These administrators receive training with their staff members. The administrators and staff members work together to foster the implementation of topics and skills introduced in the staff development sessions. It is important that a high level of trust between supervisors and staff be established.

Finally, effective staff development programs should provide for and encourage an atmosphere in which teachers work together as professionals and, where the sharing of ideas and skills becomes the normal approach within the school.

Quality Staff Development and Rural Schools

Quality staff development in rural schools does not differ from such development in urban or suburban schools. There are several factors, however, that result in differences between such schools in regard to their attainment of quality programs. They are as follows:

1. Rural schools are often greater distances from universities and consultants who could help in the initial training process. As a result, rural schools may have to use alternative sources to get credible presenters to staff.
2. Rural schools may have more teachers who teach in areas other than those in which they received their primary academic training.
3. Rural schools may have a smaller number of teachers because such schools tend to be smaller in size. Fewer teachers can be both a strength and weakness in the development of quality programs.
4. Rural schools tend to have a higher turnover rate among teaching staff which results in the need to be constantly retraining.
5. Rural schools tend to have fewer dollars devoted to staff development budgets.

6. Rural schools, and their constituency, tend to view new ideas as fads. Thus, they tend to resist such ideas.
7. Rural schools tend to have fewer quality substitute teachers who could be used to free up the regular teaching staff to participate in staff development.
8. Rural schools tend to have a more clear and less diverse mission than many urban or suburban schools.
9. Rural schools tend to have a school climate which is based on trust. This trust can be beneficial to the long term success of the staff development effort.

The Means of Rural Staff Development

The above list indicates that rural schools have both advantages and disadvantages when trying to devise quality staff development programs.

Rural districts should use their limited resources in concert with other such districts to attract quality presenters. They should use special discretionary funds (such as Phase III in Iowa) for staff development purposes. They should fully utilize the educational services personnel of intermediate educational units (the AEA in Iowa). Finally, they should explore using telecommunications technology (such as TI-IN, Narrowcast, and microwave broadcasts) to enhance delivery capabilities.

In conclusion, quality staff development programs have similar attributes regardless of where the school district is located. The task before rural schools in providing such programs is to maximize the strengths inherent in rural areas and minimize the weaknesses.

Section VIII
Technology and Its Implications for Iowa Rural Education

Introduction

Educators concerned with service delivery to rural areas are once again looking to technology as a potential means for that delivery. In the following sections, contributors review key aspects of planning for and implementing technology applications towards improving these services. Four overarching observations are offered. First, educators must focus on the educational outcomes that are desired prior to proposing a technological solution. Too often, the opposite happens. Second, a systematic and comprehensive program needs to be undertaken to increase the awareness among potential producers (teachers and administrators) and consumers (learners) of successful technology applications. Third, state agencies must provide the leadership to local districts in facilitating the planning, implementing, evaluating and disseminating of information on efficient and effective uses of technology in education. And finally, in the course of implementing technology applications in teaching and learning, educators must take care to develop structures and mechanisms to accommodate the human aspects of technology use. Research has shown us that this is an important consideration to insure long term acceptance and effective use. In the following sections, the authors explore these and other points, as well as reflect on the implications of technology for rural education.

Larry Costello, Treasurer
People United for Rural Education

I have been a member of the Ventura Community School District Board of Directors since September of 1976, and on the board of Directors of People United for Rural Education (PURE) for the last ten years. Currently, I have daughters in fifth grade, eleventh grade and one who is a sophomore in college. I write this paper as a lay citizen, and a parent who has spent considerable time in educational interests.

I selected "Technology and Its Implication for Iowa Rural Education" as my field of interest because of the direction our local school is currently going. As we were discussing the new state standards, how to meet them and how we would enhance our students learning experience, we decided that we needed to really meet the challenge of the standards and not just meet the letter of the law. We decided to ask the voters of our district for a fifteen percent enrichment levy. On February 7, 1989 we were successful with a fifty percent turnout of voters. We received a seventy-five percent yes vote to modernize our school's curriculum. Technology is going to play a major roll in this endeavor as follows:

1) We are going to start by hiring a computer "expert." Yes, he or she will teach computer classes to the students but the primary responsibility will be to make the rest of the staff computer literate. He/She will see that other teachers acquire a basic literacy in computer usage. Then help the staff select software which will enhance their classrooms. *Each* classroom, kindergarten through twelth grade, will be provided enough computers so that they will be a natural part of the classroom setting. We want the computer to be used as one of many learning tools as opposed to simply using a computer for period activities.

2) Then we want to turn our 1940's library into a 1990's media center. Again, here will be several computers so students can be assigned research, or gather information and use the computer to organize and write their papers. We want to connect our computers to the Iowa State University or University of Minnesota computer library service so that the information available is greater than we can provide locally. Also to be housed in the media center will be VCR cameras and our current library of local tapes. The VCR camera and player will play an increasing roll in classroom work. National guest speakers can be present in each classroom with the use of a VCR tape.

3) We already have a satellite Dish which our social studies and Spanish departments use extensively. Third year Spanish is taught as "conversational Spanish" and much of the curriculum comes off the dish in Spanish news, sports, weather, and soap operas. Use by more than these two departments has been small due to the fact that the TV media room is the only room equipped to receive the dish. We will now be able to cable more classrooms so that all teachers will be able to use the dish for their classrooms.

4) We currently are not subscribing to any of the interactive instructional television satellite systems, such as: (a) the TI-IN Network uplink-

ing out to San Antonio, Texas; (b) Oklahoma State University's Arts and Sciences Teleconferencing Service; and (c) The SciStar Satellite Project originating from the Talcott Mountain Science Center in Avon, Connecticut. We are hoping to be able to add a second foreign language, calculus or any subject available that we have a student interested in. We are, however, using the dish for inservice training for teachers.

5) A year ago we added Computer Drafting to our regular drafting program. This year we have two seniors accepted into college with a drafting major because of this added program.

6) We already have a computer lab which we use for teaching computer class. We hope to expand this to more levels of instruction, and more efficient instruction through interconnection between teacher and student computers.

I feel that technology can benefit rural schools to a great extent, but we have to beware that it can only be used as a tool and not as a panacea. Computers are becoming even more necessary in our daily lives and our graduates are going to need to be proficient in their use, whether they go on to college or enter the work force. College bound students will need to be able to research with a computer, and to store information and later be able to retrieve it off discs. Satellite TV instruction is in its infancy. It can provide: 1) equity and increase quality of educational opportunity, 2) access to subject matter experts or career role models not available in the local community, 3) interaction and joint activities with students in other schools, 4) increased access to information and instructional resources, 5) opportunities for staff development and inservice training, and 6) increased school/community linkages.

With fiber optics and other technical advances, I feel technology will be a partner in our educational experience in rural Iowa.

Richard Drey, Superintendent
Maquoketa Community School District

Dateline, April 10, 2000 — Des Moines Register, Des Moines, Iowa

RURAL IOWA PROVIDES WORLDWIDE EDUCATIONAL EXCELLENCE MODEL

"As a result of what were considered at the time as 'radical initiatives' presented by Iowa educators approximately eleven years ago, today, the world stands in awe at the educational attainments now being demonstrated by students in all Iowa public school districts. The State has used technology to provide the most effective and efficient system yet documented by man anywhere. The Iowa technological model achieves but one practical purpose, namely, that all students are experiencing and demonstrating success at high standards at all levels."

Based on the following understandings, this is the vision I see as I gaze into Iowa's "Rural Education" crystal ball. First, the implementation of today's technological advances within Iowa's educational institutions in no way assures improved educational results. Second, the implications of today's technology for rural education are limitless; they are restricted only by our designated state and community leaders' narrownesses of perspective and petty jealousies. Third, there needs to be a realization from within the State that, from a national perspective, *all* of Iowa's educational institutions are "rural" in nature. Fourth, since the people of this state see value in these educational institutions being of all sizes and shapes, these institutions will remain dependent upon one another for their continued success. Until such basic understandings are accepted it appears that the major focus in regard to using technology will be to *preserve* an educational delivery model rather than to improve educational outcomes for all concerned.

So let's turn over the sands of time to that newspaper report of the conference of April 7-9, 1989. What took place then to alter Iowa's course in history so dramatically?

Dateline, April 10, 1989 — Des Moines Register, Des Moines, Iowa

RADICAL INITIATIVES PRESENTED BY IOWA EDUCATORS

"After considerable discussion and name-calling, conference attendees at an educational leadership conference at the University of Northern Iowa agreed to establish a plan for charting a statewide educational improvement plan for the State of Iowa. The plan is based on the premise that all students have a right to learn and succeed at high standards at all 'levels of education' without having to guess what those high standards are. A 'level of education' was

defined as any educational attendance center allowed by the State to meet the educational needs of students. Attendees initiated task forces representing each educational institution within the state to identify 'outcomes of significance' for all levels of education. These outcomes were not to be defined in terms of disciplinary scope and sequences or by courses to be taken, but in terms of answering the following question: 'What do we want students who graduate from this 'level of education' to be able to demonstrate in terms of knowledge, in terms of skills and in terms of personal orientations?' Around these outcomes, each task force is to be given the charge to design their 'level of education's' instructional organization, their subject content components and their practices for moving their students toward these outcomes.

The plan also calls for each task force to then recommend that each 'level of education' deliberately provide its students with both the time and the type of instruction they need to reach these 'outcomes of significance.' The newest of technological advances will be utilized throughout the State as a number of similar 'level of education' networks will be established. These networks will cooperatively support one another in meeting student needs. A few of the technological methods discussed to meet these needs are as follows:

1. *State-of-the-art student computer labs and administrative computer centers* are to be provided in such a manner that every student and teacher within the State has equal access. As a result, daily performance records will be available on each student showing continual progress toward the 'outcomes of significance' and daily plans of assistance for each student will be provided by computer to aid teachers in providing appropriate instruction.
2. *Satellite-based instruction* for students, teachers and administrators are to be made available at all 'levels of education.' State initiatives are recommended to encourage and make easier the utilization of this technology.
3. One *interactive video alternative* such as instructional television fixed signal (ITFS), two-way cable communications, microwave configuration or fiber optics is to be made available to every 'level of education' sanctioned by the State.

In addition, it was recommended that statewide computerized data systems be provided to every 'level of education' sanctioned by the State. Staff inservices are to be provided through statewide satellite teleconferencing all in an effort to clarify the focus of instruction on the outcomes of significance at each 'level of education.' A statewide acceptance of the 'outcomes of significance' by each 'level of education' is being asked for. It was the decision of the attendees that it

> mattered little what kind of technology is available to rural educators now or in the future unless there is a consensus as to what purpose technology is to serve. Attendees called for immediate attention to be given to the task of redefining the present educational delivery model in terms of improving the achievement of all students toward 'outcomes of significance' by first identifying and defining those outcomes at each 'level of education'."

Can technology be used in achieving educational tasks? Only a foolish man would answer in any way other than "Yes." However, technology can be viewed only as another instructional tool or methodology developed to deliver knowledge, skills or orientations to students. The important consideration which first needs to be resolved before technology can be utilized most appropriately is what knowledge, skills or orientations are to result from this usage. Lily Tomlin has it right from the start back in 1982, when she rephrased a famous quote by stating, "Maybe if we listened to it, history would quit repeating itself." So did *Alice in Wonderland*:

> "Would you tell me, please," said Alice, "which way I ought to walk from here?"
> "That depends a good deal on where you want to get to," said the Cat.
> "I don't much care where . . . ," said Alice.
> "Then it doesn't matter which way you walk," said the Cat.
> "So long as I get somewhere," Alice added as an explanation.
> "Oh, you're sure to do that," said the Cat, "if you only walk long enough."
>
> L. Carroll, *Alice in Wonderland*

Arnold Lindaman, Assistant Superintendent
North Scott Community School District

It is true that technology, economics, demographics and international factors are pressuring the nation and our state to completely transform public schools' uses of instructional technology or risk a growing gap between educational "haves" and "have nots." In 1988-89, 54.4% of the 433 districts in Iowa had a student enrollment of 600 students or less. These 236 districts enroll 18% or 86,582 students of the 480,346 students in Iowa. Indeed, with open enrollment bearing down upon us, rural district educators, board members and parents have yet another reason to look at uses of technology and wonder if they are keeping up with the "Joneses."

The educational achievement level of students from rural Iowa schools with a K-12 enrollment of 600 or less is a crucial factor to parents who are deciding where to live or considering transferring their child to another district under the open enrollment plan. Other trends/issues, besides the potential open enrollment plan in rural education, are school consolidation and its alternatives, utilization of distance education strategies, teacher preparation, recruitment and retention, and rural school effectiveness.

In the booklet from the Iowa Department of Education entitled "New Standards for Iowa's School," this issue is addressed specifically, "The Board shall adopt a plan for the efficient and effective use of technology in the instructional program. The plan shall provide for the understanding and use of current technology by staff and students and shall include a procedure to review the district's utilization of technology as a teaching and learning tool." As we redesign and seek financing for education, rural educators need to view this standard favorably and as an opportunity to solve some of the other issues also being discussed, namely, staff development, curriculum diversity and equity.

While the new state standard is noteworthy and computer and communications technologies are making teaching and learning more productive in the workplace, in the home and in private settings, productivity of the schools is declining, according to the report "Technology and Transformation of Schools."[10]

Dr. Lewis J. Perelman states that, "Merely injecting electronic tools into the classrooms, while leaving the basic design of education systems unaltered, offers little hope for major improvements in educational productivity." We need to overcome four main barriers that currently are blocking technological progress in education:

1. Absence of real choice is still problematic at this point in Iowa even with the quick legislative fix of open enrollment. We need effective cooperation and competition within the public educational systems to provide an incentive for administrators to adopt productive innovations.
2. Employers still over-rely on academic diplomas instead of detailed assessments of employees' knowledge and skills. Students who have advanced knowledge and skill do not see any economic payoff for

taking advantage of an instructional system that could accelerate their progress through a curriculum.

3. Continued financial support is needed to sustain local and state implementation efforts. It is estimated that in five years, 5% of the schools will be making significant use of technology to deliver and assess instruction. However, one limiting factor in using technology is the effect of the hai. .ife for technology. Computers and software on the cutting edge five years ago have been replaced with something more attractive. School districts that were adding equipment and software in stages now may have a compatibility problem. In large districts, this may represent only a logistics problem, but in smaller rural districts this may mean stepping off the technology train — maybe too soon.
4. Provisions for students who need to learn how to develop positive and healthy relationships with their peers and adults. This obstacle may be the biggest hurdle that even interactive technology may not be able to provide. Will technology have enough of the high touch aspects to meet the needs of its users?

Unless rural educators and legislators implement these incentives and seek these conditions, application of technology in rural education will attain only a small fraction of its potential. To remove these obstacles, this author offers Perelman's recommendation as a stimulant to begin the dialogue. He suggests that states deregulate their public education systems to give more choice to students and more autonomy to teachers and school administrators at the local level. Open enrollment may be a step in that direction.

Additional statements that may be helpful in developing a statewide consensus on this issue are listed here from the "Long-range Plan for Technology of the Texas State Board of Education, 1988-2000 (A Condensed Summary of Recommendations)" This document contains the following position statements for rural educators:[11]

1. No student would be denied, by virtue of district sparseness or teacher shortage, coursework necessary for employment or higher education.
2. Teachers can have both the responsibility and the technical resources to guide the instruction of their students in the most appropriate and efficient way.
3. Performance, not processes, can determine advancement.
4. Performance and socioeconomic status are unrelated.
5. Adults can continually enhance their job and life skills.

The need for reaching a consensus on the use of technology is truly great as the above statements suggest. There are other sources that also stress the need for immediate action. According to The Math Report Card done by

Educational Testing Service, Americans do not measure up well.[6] "If current demographic and economic trends continue, American business will hire a million new people a year who can't read, write, or count." Despite promising research of technology based learning systems, there is yet little recognition that the present methods are inadequate and are not working. Some see a revolution in the next 15 years in the way educational services are delivered. Our input, in terms of money including Phases I, II, and III in Iowa, has increased but what about output, as measured by academic achievement? Will our consumers and taxpayers continue to be willing to support an educational establishment that isn't meeting the needs of its learners?

What are the choices, then for rural educators? We can either lead, participate, or follow in, the revolution. This author's position is to strongly recommend the first action. The struggle to be the provider of educational services, a multibillion-dollar business, will be crucial to the survival of public education. The private schools have the advantage of flexibility and knowing in detail how the competitive market works. The consequences for public education, particularly rural education, if it does not become equally flexible and competitive, will be a decline of their share of the educational market. As that famous American cartoon character once said, "The future just isn't what it used to be."

Let's take a look at Iowa's educational future and see what changes may take place because of implementing technology. Here is a brief list of those changes:

1. Parents, staff and students may truly collaborate in the decision-making process involved in implementing technology. Families and students will be offered a diversity of settings, methods and technologies for learning, including at-home education, traditional academies and workplace centers for employees' children.
2. All students should have access to one full-featured and networked computer for every two or three students. The computers, according to experts should have a 1,000 by 1,000 bit-mapped color screen, a speed of perhaps five million 32-bit operations per second, memory of 4 million bytes, and a 3½-inch disk drive. Each system can access hard disk and CD-ROM and videodisc drives.
3. The entire content blocks of various curricula may become available in computer-assisted, computer-managed instruction format that fully integrates books, films, tapes, and other instructional media. It will encourage telecommunications among students and access to remotely located data banks.
4. Students may spend most of their school day working in small groups of three or so. Computers could mediate their learning activities. A mastery learning mode with cooperative learning might enhance the use of technology.

5. There may be fewer teachers, but they will receive a salary that puts them well into the upper middle class. Teachers will not spend as much time lecturing. They will serve more as mentors who help students attain mastery and will have more time for the students who can and want to make unusually rapid or creative progress.
6. Students will be expected to take on more responsibility for their own progress.
7. Roles, other than teacher, will come into being such as learning diagnostician, courseware composer, performance contract monitor and home-based instruction consultant.
8. As a result of increased educational productivity, most children will complete their basic education by age 15 leading to an expanded role for community colleges.
9. Local education agencies will be known less as (school) districts and more generally as "education districts," increasingly serving not only children but the entire family and people of all ages.
10. Learning no longer will be merely preparation for work but an inherent part of most American jobs, with the result that educational technology will permeate the workplace and the home.
11. Learning will become an important growth industry and a critical factor in America's international competitive advantage.

If rural educators want to bring about some of these technological changes, what actions are necessary? Some actions have already been implied but in summary they would include:

1. Pass enabling legislation that benefits rural education in Iowa. Propose legislation that will fund a technology allotment similar to $50 per-pupil amount in Texas. Study the funding source used in Missouri during 1988 where they enacted SB 709 which placed a three-cent excise tax on videocassette rentals with the funds earmarked for distance learning.
2. Reinstate support for instructional television.
3. Establish and maintain a statewide electronic information transfer system. A statewide plan for the use of technology in education, such as Iowa's Plan for Educational Telecommunications, should be submitted by the State Board to the state legislature noting specific applications for the rural Iowa school districts.
4. Establish a research and development consortium and demonstration programs.
5. Incorporate courseware adoption and review of educational technology into the textbook adoption process.
6. Support teacher and administrator training in technology.
7. Create rural educational advisory committee on technology standards to the state board of education.

Open enrollment, economics, demographics, technology and international factors are all pressuring our state and rural districts to make use of instructional technology or face a growing gap between districts with complete course offerings and those without. What are the choices, then for rural educators? As is true in most major movements in history, we can either lead, participate, or follow in, the revolution. This author's position is to strongly recommend the first action. This struggle to be the provider of educational services, a multibillion-dollar business, will be crucial to the survival of public education in rural Iowa school districts.

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Technology in education is an issue which is of paramount importance today in all Iowa schools and not just rural school districts. Technological advances in educational delivery systems have expanded greatly during the 1980's and possibilities seem almost limitless for the coming decade.

Although available technologies impact upon all schools, we will concentrate on implications for rural Iowa schools for the purpose of this discussion. As schools in rural areas struggle with the challenges of preparing students for the competitive world and for making the tough choices in life, new technological advances in educational delivery systems provide tremendous opportunities for these schools to expand the curriculum and broaden the range of educational experiences available to their students.

How do rural districts located away from major metropolitan areas prepare students to enter business and industry which rely on the use of specialized technological equipment? Many districts in our area of the state have met this challenge by entering into cooperative programs with Iowa Western Community College in Council Bluffs. Programs such as "Model Office" and "Principles of Technology," administered by the area college, enable these schools to bring technological equipment utilized in business and industry into the local school setting in order to prepare students for the world of work. These two programs mentioned are in the areas of business education and industrial arts but there are also programs available in other curriculum areas. Without such programs, rural students would have limited knowledge and experience in these areas since their communities lack the industrial and business sites which would utilize many of the new technological advances.

Faced with declining enrollments and limited resources, rural school districts will have to look toward increased cooperation with agencies such as the area colleges or enter into educational cooperatives composed of two or more school districts working together to share the cost of equipment and instruction. This type of cooperation is essential in rural Iowa in order to provide equality of educational opportunity and to allow the smaller districts to continue their existence.

One new technological advance, which holds much promise for rural education, is the concept of interactive television. Through this method of instructional delivery, several classrooms across the state can be linked to the classroom where the instruction is actually taking place. With an interactive system, two way communication can take place between the instructor and students in any of the classrooms linked to the system.

This would allow districts the opportunity to provide advanced courses and supply resources for instruction which otherwise would not be possible in many rural districts.

The interactive television concept probably provides one of the greatest hopes for rural districts at this time if it will be allowed as a means of meeting instructional requirements. Utah's Distance Learning Program,

utilizing technology devised by IBM, was developed to meet the need for foreign language instruction and has proven to be a valuable method of instructional delivery. This type of delivery system is currently being discussed in Iowa as a means of linking all areas of the state into a system which has the capabilities of allowing two way communication with people in other parts of the United States and other parts of the world.

Not only is interactive television seen as a major educational tool for rural schools, it is also looked upon as an answer to rural concerns of economic growth. With the use of a network of fiber optic transmission lines, large national or international companies can locate in a rural community and maintain direct communication with the company's main headquarters. This capability, along with the capability to provide increased educational opportunities, has the implication of providing a brighter future in rural Iowa. That makes it imperative for local school districts to keep in tune with technological changes, and be prepared to take advantage of the new opportunities which are yet to become available to improve the quality of education we currently provide.

Not to be forgotten in this discussion is the role that the computer has played in changing the way we teach and administer our schools in recent years. The use of the computer has expanded greatly and has also made it possible to introduce new materials and new instructional methods into the classroom. To meet the ever changing demands of society, computer applications will need to be expanded. Computer technology now allows the opportunity to link a variety of electronic media to bring new learning experiences into the classroom.

Yes, technology does have far reaching implications for rural education, but it also provides renewed enthusiasm for those who wish to take advantage of new educational opportunities. It is an opportunity for rural school districts to provide experiences for their students which were not possible before and gives a renewed spirit which will allow Iowa to remain a leader in providing quality education programs.

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Americans have long believed that "Yankee ingenuity" can be applied, to good result, in most any circumstance. We have faith in our ability to study a problem and fashion apparatus to address it, be it machine or program. Such a propensity has contributed, no doubt, to the unparalleled achievements in science and technology that we have seen in this country, and to the quality of life that we have come to enjoy. But there is some consensus that this advance has not been an unmitigated success. For it seems that there are always social consequences, however subtle, to technological progress and that these consequences occasionally have a dark side. One has only to look to the Industrial Revolution of the last century and the biotechnology advances since World War II to find numerous examples of social problems (and some remedies), and moral and ethical dilemmas (but fewer answers), appearing in the wake of technological breakthroughs.

So when we turn to a local concern — like the provision of education services in rural Iowa — it is not surprising to see technological solutions being proposed and developed. That is all well and good — let's invoke the "Yankee ingenuity" once again. But at the risk of sounding like a "New Age" Luddite, I urge caution. To borrow a familiar metaphor — before we harvest the yield, we must assess the market to select the right product, we must prepare the ground, then seed and provide nurture. The application of technology in education can have unintended as well as intended consequences. Care in the early stages — tempering the "Yankee" impulse with careful planning — can help ensure that the technological solution effectively addresses a real need.

Assessing the Market for Technology Uses

It has been long established that service delivery to rural America is problematic due to geographic expanse, dispersed population, and limited resources. While there may be some cause for judging rural education in Iowa problematic, it seems that on the whole, rural educators have coped remarkably well with scarce resources and working in isolation. In a 1987 study conducted by the Regional Educational Laboratories, rural educators noted that the following conditions required little or no improvement: student behavior, student attendance patterns, availability of quality instructional materials, classroom climate, stability of teaching staff and adequacy of facilities (Arends, 1987). Though rural America may not be an academic Camelot, many of these conditions would be the envy of teachers in many classrooms across the country.

The leading concerns on the list of rural educators as reported in that 1987 study were these: 1) the academic performance of children from low income families; 2) the development of thinking and reasoning skills; 3) the improvement of self-esteem and aspirations of children; and, 4) teacher isolation issues — lack of recognition for outstanding perfor-

mance, lack of quality staff development, and isolation from peers. Relatively speaking, it would appear that rural educators may be faring better, in many ways, than their urban colleagues. It would appear that the overall status of rural education is reflected in the title of the Regional Laboratories' report: rather than remediating an intolerable situation, rural educators are, as the title suggests, *Building On Excellence*. If that is the case, what is the role of technology in such a scenario? I suggest that two straightforward working assumptions guide our thinking. First, technology applications must first aim to ameliorate the unsatisfactory conditions, or, equity should be served. Second, they should also provide a structure that enables the enhancement of the conditions that are already productive.

We know from past experience that technology applied to education can provide choice, enable individualization, and enhance connectedness. For example:

—The use of audio and video teleconferencing for distance education has been used to provide instruction to remote areas where previously, in several single locations, there have been an insufficient number of students to justify the instructional cost.
—Computers and the increasing array of drill, tutorial and tool software have enabled increased individualization of instruction according to students special needs, thereby freeing the teacher's attention for other classroom activities.
—Computer conferencing and electronic mail have enabled the connection of students, teachers, and administrators, regardless of geographic location.

These illustrative uses could be applied to the stated needs of rural educators, particularly the linking of instructional staff for staff development and contact with their peers. These systems and approaches could also enhance currently productive practices. In Iowa, there is evidence of this enabling technology use apparent in different areas.

Preparing the Ground

Significant statewide technology initiatives are underway that promise enhanced educational opportunity through uses of technology. Under the auspices of Iowa Public Television, a statewide interactive television system is under development that will enable two way interactive television among any collection of educational sites in the state. Iowa Computer Using Educators (ICUE) is a young, growing association promoting increased productive uses of technology in education. At the University of Northern Iowa, a computer conferencing system has been established that enables a student teacher in the field to interact with faculty back on campus, and resource teachers and peers in other parts of the state.

thereby drawing upon the collective intelligence of the resources available through the network to solve problems of educational practice. With these trends evident, and initiatives underway, what is left to be done to productively apply technology to areas of rural education that, according to rural educators, need improvement?

From the recency of the above examples, one might draw the conclusion that only time is needed. But, if the history of technology application is any guide, educators will need more than time (Cuban, 1986). They will need to address a deep structural problem regarding the preparation of teachers.

Seeding and Providing Nurture

If cost were not a problem — if we could immediately fund and install the statewide telecommunications system and we could supply computers everywhere across the state — we would still be missing the mark because we are not preparing our teachers to use technology in their teaching (Electronic Learning, 1989). This is due largely to the fact that the teacher education faculty have not, for a number of reasons, integrated these tools into their teaching. This is not to suggest that computers can appropriately find application at every turn of the curriculum across every field of knowledge. But it does suggest that we can never hope to realize the potential of technology, of which we get an occasional glimpse, unless we invest in an enormous professional development initiative with the faculty of the schools and colleges of education. We must enable the faculty to explore applications of technology in their respective areas and incorporate those uses into their courses. This is both a capital and labor intensive proposition. But unless the faculty incorporate these tools and model them for students, we can not expect to see anything more than occasional, intermittent uses by exceptionally able and motivated teachers in the field.

The front end of the teacher education process must be reoriented at the considerable cost of equipment, release time, differentiated staffing, professional development programs, and resource and support staff. Until that happens, we will continue to tinker at the fringes of real change, and technology applications in the service of rural education will be a function of individual initiative and serendepity.

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Students today and in the future will enter a complex world of rapid change and high technology. As a result, our schools must change to meet the needs of students. Modern technology has provided students numerous advantages which were not available to their grandparents. This is certainly true regarding education.

"Distance learning" has become the latest buzz word in education journals and at conferences. The interactive television instructional network is a part of that distance learning concept; and, it is *definitely* different from the types of learning that took place over television in the fifties and sixties. Today's television classrooms are primarily two types — satellite systems and instructional television fixed service (ITFS) systems.

The interactive television instructional system provides the needed link to assist local schools in providing substantial educational opportunities to students. Small schools could remedy four major problems through the use of the system. The first is the new standards. A second concern is the declining enrollment. Third is the teacher shortage in the foreign language fields and upper level subject area courses. The fourth concern is the geographical distances between schools.

Governor Branstad has proposed a telecommunications system to provide Iowa's rural schools with a fiber-optic broadcasting system for educational and vocational programs. Interactive television systems can help provide total educational opportunities to all Iowa students.

The learning process requires the student to be an active participant. Whether the teacher is located in the classroom or in one many miles away can become an insignificant factor if students experience two-way interaction during the learning activities. A discussion of the four major problems follows:

1. *New Standards*

The General Assembly has approved new standards for all Iowa schools to meet by July 1, 1989. The new standards will require all accredited schools to increase courses provided to students from twenty-seven to thirty-six. In addition, the new standards specify that each of the thirty-six units must be "offered and taught." An exception is allowed for the third and fourth year of a foreign language if *no* students enroll.

Many school districts will be forced into offering and teaching a third and fourth year of a foreign language when only one or two students enroll in the course. Teaching a course with a small enrollment is financially inefficient and a luxury that schools *cannot* afford.

Although several schools presently use interactive television instruction to increase student offerings, the state has determined that only interactive system courses with a certified teacher at the receiving site will be allowed to meet the required course offerings. School representatives and other groups have made several attempts to encourage legislators to

reconsider, thereby, allowing interactive courses taught by an Iowa certified teacher at the sending site to meet the standards.

If schools were permitted to use interactive television courses as part of the required curriculum, additional efficient and effective opportunities could be provided to students in all curriculum areas. Students' choices could include several different foreign languages: Russian, Japanese, German, French, and Spanish. A wider variety of upper level courses in math, social studies, and English could also be offered. In addition, students who desire enrollment in college-level coursework could participate through the interactive system.

2. *Declining Enrollment*

Each year school officials make decisions to teach or not teach specific courses based upon the number of students who enroll in the course. Courses are often *not* taught because hiring teachers for one-student or two-student courses is not economical. The interactive television system provides the opportunity for several rural schools to form a consortium so that students can take the low-enrollment courses in an efficient, economical format.

An often-used argument against small schools and small enrollments is that students are not challenged academically because of the limited number of students in the course. The interactive television system allows students to interact with others and be involved in many challenging educational situations.

Fewer interactive system courses will be made available to students unless local districts receive an incentive to provide them. The additional cost of tuition, books, and room proctors may cause local schools to omit television courses. This would be less likely to happen if the courses could be counted as a part of the required state curriculum.

3. *Teacher Shortage*

The new standards' original foreign language curriculum requirement specified four sequential years of one foreign language. At a State Board of Education meeting, board members modified it to require two sequential years of two different foreign languages because they believe that students deserve a choice regarding foreign language offerings. Since that modification, the standard has reverted to requiring only one foreign language; the State Board of Education discovered that an insufficient number of teachers were certified, making it impossible to meet such a requirement.

The State Board of Education was certainly justified in considering the two foreign language requirement. If the intent of the new standards is to increase the equity of course offerings for all students, regardless of their geographical location in the state, then it would appear necessary to *encourage* school districts to offer students a wider course selection.

The interactive television system provides that opportunity. Districts will be more likely to spend $15,000-$20,000 in order to participate in an interactive television system if there are incentives to do so. When the state refuses to recognize the courses as part of the required curriculum, most of the incentive is lost. Peter Stoll, at the Center for Learning Resources, stated, "If the United States is going to be competitive, given the wealth of high technology, we are going to require a highly trained work force. How do you get enhanced math, science, and second language education to our student population, particularly when this is an era of limited resources?" Technology has the answer — interactive television instructional systems. Local school districts must have cooperation and support from the state to properly utilize the technology.

4. *Geographical Distances Between Schools*

The state has provided school districts many incentives to share facilities and instructors. The concept can often look good on paper but bogs down in practical application when the distance between schools is too great to be economical. It may appear beneficial to offer a course taught by an instructor from a neighboring district; however, if the instructor spends more time traveling than teaching, the idea might be abandoned due to the expense of the teacher's commuting time.

Through modern technology, it is now possible to offer the course in a practical and efficient manner. An interactive television system can instantly link several classrooms and permit the teacher and students to communicate and interact at all sites.

Recommendations

1. The General Assembly and Governor must provide leadership in working with local schools to improve the quality of educational opportunities for students by implementing legislation which allows televised courses as a part of the required state curriculum.
2. The Department of Education and the Iowa Public Television Network must provide leadership in working with local districts to develop procedures and implement interactive television instructional systems that will provide educational opportunities for students.
3. Local districts must promote and develop educational opportunities through interactive television instructional systems by identifying funds and installing equipment to receive the courses.
4. The Department of Education, area education agencies, and local school districts must provide ongoing teacher inservice to insure that television instructors are properly trained, thereby providing effective instruction.

Conclusion

This paper identified four problems that could be minimized or eliminated if rural school districts were to install an interactive television system. School districts could more effectively and efficiently meet the new state standards. Declining enrollment would not be stopped; however, the effect of declining enrollment — small class size and/or elimination of small-enrollment courses — could be reduced. The ability of schools to hire teachers in specific subject areas could be increased through the sharing of staff. Geographical distances between schools would be immediately erased through the use of modern technology. By flipping a switch, schools within a specific area or throughout the state could be linked in order to provide excellent opportunities for students.

The fact remains that a roadblock impedes rural school districts from implementing available modern technology which would provide additional educational opportunities. The General Assembly, Governor Branstad, and the Department of Education must recognize that courses taught via the interactive television system are appropriate and effective. Good things happen for students when state agencies and local districts work together and utilize *all* the resources available to them.

Section IX
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